# DECLARATION UNDER 37 C.F.R. § 1.132

Mail Stop AF
Commissioner of Patents
P.O. 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Pierre Messier declare and state that:

1. I make the declaration with U.S. application Serial No. 10/528,005. I am the inventor of the subject matter claimed in this application. I am familiar with the Office Action mailed on March 30, 2009.

2. Attached is my Curriculum Vitae.

3. The present invention claims a protective media (*e.g.* filter media) that comprises a charged dielectric carrier (*e.g.* nonwoven material) containing an antimicrobial iodinated resin. The inventive filter media has the ability to filter and kill a large number of diverse microorganisms.

4. I am aware that there have been attempts to combine the beneficial properties of an electrically charged filter media and an antimicrobial filter media prior to the filing of my application. I am also aware that these attempts have generally met with failure because the antimicrobial agent deteriorates the electric charge and the electric charge diminishes the antimicrobial efficacy of the active agent.

5. I have surprisingly discovered that incorporating an iodinated resin into a nonwoven filter media provides both an antimicrobal effect and significantly stabilizers the charge on the filter media and as a result, enhances the filtration efficiency of the filter media. The synergistic effect achieved when incorporating a charge and an antimicrobial iodinated resin on a filter media is demonstrated in experiments described below.

6. Samples (100 $cm^2$) of blank nonwoven material (no iodinated resin) and samples of a nonwoven material incorporating a demand disinfectant iodinated resin manufactured by Triosyn Corporation (Triosynated samples) were compared. The test samples were composed of one-ply 20-XP media (with and without 10 $g/m^2$ of iodinated resin) sandwiched between 2 layers of 35-ZPN media. The samples were challenged

with an aerosol containing viable viral particles (MS2 Coliphage) for 4 hours at a flow rate of 42.5 LPM. Both 20-XP and 35-ZPN are electrostatically charged meltblown media manufactured by Transweb Llc (New Jersey, U.S.).

7. Following exposure to the viral-loaded aerosol, an Electrostatic Fieldmeter Model FMX-002 (manufactured by Simco, Hatfiled, PA) was used to measure static charges on the surface of the blank and Triosynated media. Static charge readings were made by positioning the device 1-inch from the sample surface. Measurements were made by air ionization and the results were given in kilovolts (kV) on the front display of the Simco testing device. Readings were taken on samples prior to and after exposure to the viral-loaded aerosol challenge.

8. Table 1 displays static charge readings (kV) obtained from blank and Triosynated media before and after exposure to an aerosol containing MS2 coliphage virus.

**TABLE 1**

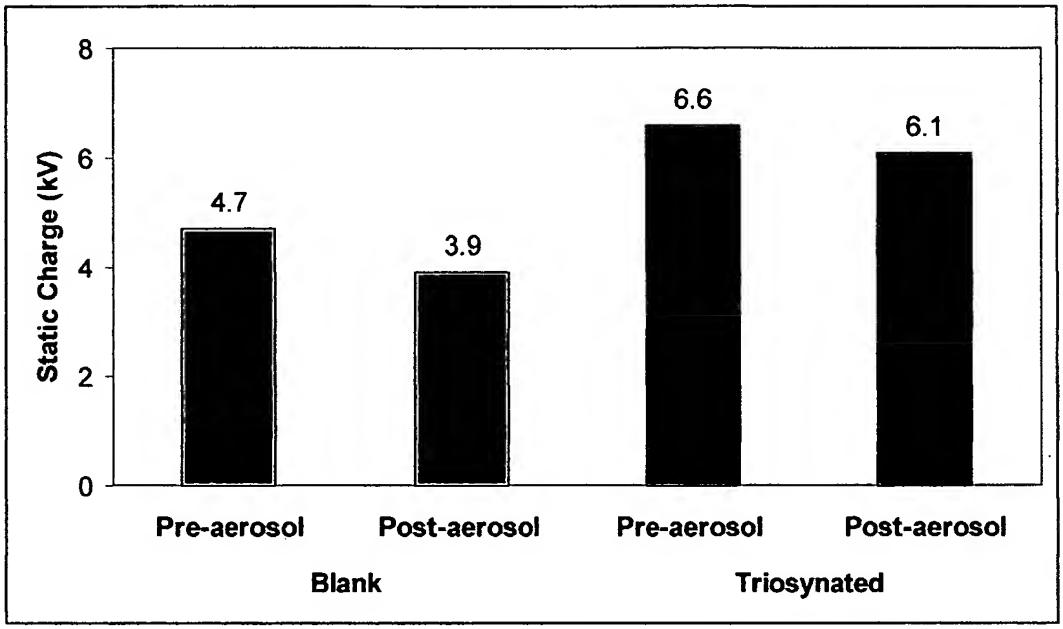
| Sample # | Blank Samples (n=3) | | Triosynated Samples (n=3) | |
|---|---|---|---|---|
| | Pre-aerosol challenge | Post-aerosol challenge | Pre-aerosol challenge | Post-aerosol challenge |
| 1 | 4.5 | 3.8 | | |
| 2 | 4.7 | 3.9 | | |
| 3 | 4.9 | 4.1 | | |
| Average | 4.7 | 3.9 | | |
| 4 | | | 6.7 | 6.1 |
| 5 | | | 6.5 | 6.0 |
| 6 | | | 6.7 | 6.1 |
| Average | | | 6.6 | 6.1 |

9. Figure 1, below, shows a comparison of static charge readings obtained from blank and Triosynated samples (n=3) before and after exposure to a viral aerosol challenge.

10. Results displayed in Table 1 and Figure 1 indicated that the static charge readings were consistently higher for the Triosynated samples as compared to the blank samples. This was observed both before and after exposure to a viral-loaded aerosol challenge. On average, the static readings were 30% higher for the Triosynated samples. These findings indicate that Triosyn has no detrimental impact on the charge of the electrostatic base media, but rather, Triosyn enhances the charge of the media. These

results were unexpected and suggest that Triosyn augments the filtration efficiency of the electrostatic media.

**FIGURE 1**




11. In another experiment, Samples (100 $cm^2$) of blank nonwowen material (no iodinated resin) and samples of a nonwoven material with a demand disinfectant iodinated resin manufactured by Triosyn Corporation (Triosynated samples) were compared. The test samples were composed of one-ply 20-XP media (with and without 10 $g/m^2$ of iodinated resin) sandwiched between 2 layers of 35-ZPN media. The samples were challenged with an aerosol containing viable viral particles (MS2 Coliphage) for 4 hours at a flow rate of 42.5 LPM. Both 20-XP and 35-ZPN are electrostatically charged meltblown media manufactured by Transweb Llc (New Jersey, U.S.).

12. Before and after exposure to the viral-loaded aerosol the filtration efficiency of blank and Triosynated samples was evaluated using the TSI 8130 Automated Filtration Tester. The TSI 8130 was operated at a flow rate of 42.5 LPM using a dioctylphthalate (DOP) aerosol to challenge the media. Filtration efficiency was determined by counting particles upstream and downstream of the media being tested.

13. Tables 2 through 4 show the results of DOP Filtration Efficiency (%) tests from three independent studies obtained from blank and Triosynated media before and after exposure to an aerosol containing MS2 coliphage virus as measured in three independent experiments.

**TABLE 2**

| Sample # | Experiment #1 (M06-0333) | | | |
|---|---|---|---|---|
| | Blank Samples (n=3) | | Triosynated Samples (n=3) | |
| | Pre-aerosol | Post-aerosol | Pre-aerosol | Post-aerosol |
| 1 | 100 (0.000)* | 99.939 (0.061) | | |
| 2 | 100 (0.000) | 99.903 (0.098) | | |
| 3 | 100 (0.000) | 99.966 (0.034) | | |
| Average | 100 (0.000) | 99.936 (0.064) | | |
| 4 | | | 100 (0.000)* | 99.997 (0.003) |
| 5 | | | 100 (0.000) | 99.982 (0.018) |
| 6 | | | 100 (0.000) | 99.997 (0.003) |
| Average | | | 100 (0.000) | 99.992 (0.008) |

* Data in parenthesis show percent penetration for each sample tested.

**TABLE 3**

| Sample # | Experiment #2 (M06-0315) | | | |
|---|---|---|---|---|
| | Blank Samples (n=3) | | Triosynated Samples (n=3) | |
| | Pre-aerosol | Post-aerosol | Pre-aerosol | Post-aerosol |
| 1 | 100 (0.000)* | 99.978 (0.022) | | |
| 2 | 100 (0.000) | 99.937 (0.063) | | |
| 3 | 100 (0.000) | 99.956 (0.044) | | |
| Average | 100 (0.000) | 99.957 (0.043) | | |
| 4 | | | 100 (0.000)* | 99.997 (0.003) |
| 5 | | | 100 (0.000) | 99.993 (0.007) |
| 6 | | | 100 (0.000) | 99.996 (0.004) |
| Average | | | 100 (0.000) | 99.995 (0.005) |

* Data in parenthesis show percent penetration for each sample tested.

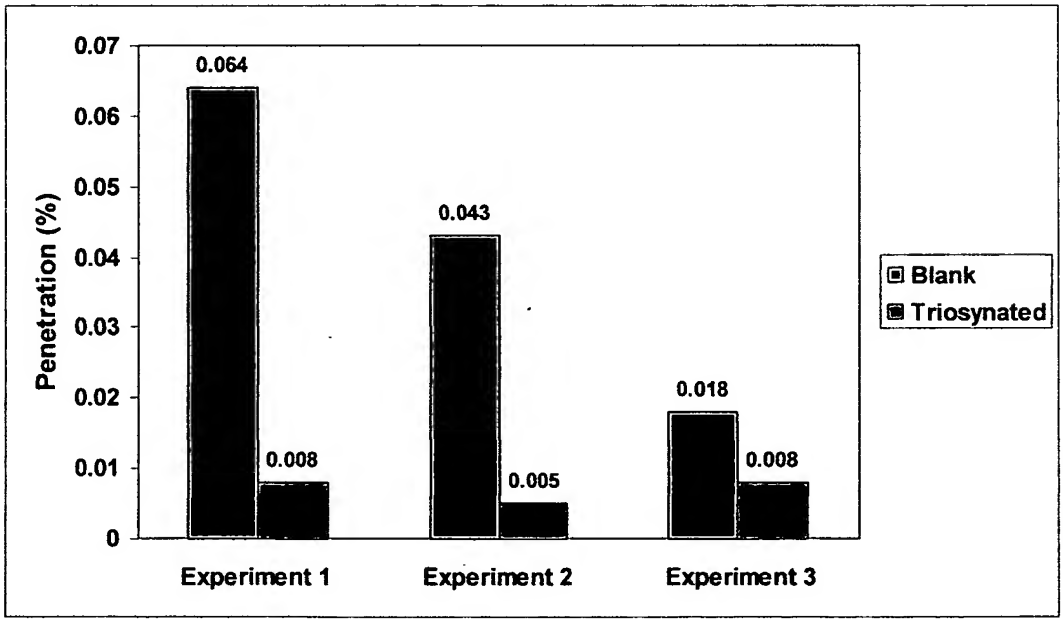
**TABLE 4**

| Sample # | Experiment #3 (M06-0351) | | | |
|---|---|---|---|---|
| | Blank Samples (n=3) | | Triosynated Samples (n=3) | |
| | Pre-aerosol | Post-aerosol | Pre-aerosol | Post-aerosol |
| 1 | 100 (0.000)* | 99.977 (0.023) | | |
| 2 | 100 (0.000) | 99.981 (0.019) | | |
| 3 | 100 (0.000) | 99.988 (0.012) | | |
| Average | 100 (0.000) | 99.982 (0.018) | | |
| 4 | | | 100 (0.000)* | 99.992 (0.008) |
| 5 | | | 100 (0.000) | 99.993 (0.007) |
| 6 | | | 100 (0.000) | 99.992 (0.008) |
| Average | | | 100 (0.000) | 99.992 (0.008) |

* Data in parenthesis show percent penetration for each sample tested

14. Figure 2 shows comparative DOP penetration obtained from blank and Triosynated samples (n=3) after exposure to a viral aerosol challenge as measured in three independent experiments.

**FIGURE 2**




15. Results displayed in Tables 2-4 and Figure 2 indicate that for blank samples, there was a significant increase in the % penetration levels when compared to Triosynated samples, after both types were exposed to a viral-loaded aerosol challenge. In experiments 1 and 2 for example, the DOP % penetration of the Triosynated samples

were on average 88% lower than the blank samples. This difference was less considerable in experiment 3, which showed an average 55% lower penetration for the Triosyn-treated samples. These findings are well illustrated in Figure 2.

16. Based on these findings, it is safe to state that a degradation of the filtration efficiency was observed for the blank samples (composed of electrostatically charged media without addition of iodinated resin) that were subjected to a 4-hour viral aerosol challenge. The filtration efficiency went from 100% prior to the challenge to an average 99.958% measured after the viral loading. The same phenomenon was not observed for the samples containing iodinated resin, which showed a very little difference between the filtration efficiency prior to (efficiency = 100%) and following exposure to the viral-loaded aerosol (avg efficiency = 99.993%).

17. Overall, these results suggest that Triosyn preserves the electrostatic charge of electret media, thus maintaining its high filtration efficiency. These findings were unexpected since it was originally hypothesized that the ionic nature of Triosyn could negatively impact the charge of electrostatic media, thus affecting its filtration performance.

18. All statements made herein are of my own knowledge and true and all statements on information and belief are believed to be true. These statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 09/09/22

Pierre Messier

# *Curriculum Vitae*

**Pierre Jean Messier**

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## *Personal Information*

Date of Birth: June 15, 1963
Languages: English and French

## *Education (Partial)*

**Université de Montréal**
**Montréal, Québec, Canada**
Post-graduate studies: theoretical curriculum in Biotechnology — Fall 1995

**Collège Marie-Victorin**
**Montréal, Québec, Canada**
College Degree in Human Sciences — December 1982

**McGill University**
**Montréal, Québec, Canada**
**Lecturer in Management – Graduate Certificate in Biotechnology**
1998-2002

## *Management Experience*

**Triosyn Corp. and affiliated companies, Mirabel, Quebec, Canada and Williston, Vermont, USA - President and CEO**

**Safe Life Corp., San Diego, California, USA – Vice-Chairman and Chief Scientific Officer**

**Inventor of the patented technologies**
**Founder of the business and companies**

**1991 – Current**

* * * * * *

Major Accomplishments

- Invented and patent protected the Triosyn® technologies
- Managed both scientific and administrative functions of the companies
- Developed the group of companies to near-IPO status (as of today), organizing corporate private and venture capital financing in total aggregate amount of over $50 Million USD
- Secured Research and Development funding in excess of $34.8 Million USD from US Defense and government-related agencies; serves as Principal Investigator and fund manager from 1996 and ongoing

* * * * * *

Other management and employment experience is detailed in Schedule A hereto.

## *Affiliations*

- Fellow of the Royal Society for the Encouragement of the Arts, Manufactures & Commerce;
- American Society of Microbiology;
- International Association of Aeromicrobiology;
- American Association for the Advancement of Science;

- Pan-American Association of Microbiology.

## *Publications, Presentations and Other Achievements*

- Presentations and research papers – See Schedule B;
- Scientific Achievements – Patents -- See Schedule C.

## *References and Additional Information*

- References as well as additional personal, academic and professional information will be provided upon request.

# Schedule A

## Professional Experience

**1990 to 1991**
**Canadian Medical Research Associates** – Montreal, Quebec, Canada
Project analyst and consultant for numerous clients such as Samson & Belair/Deloitte & Touche (Montreal), Sovadec (France), Brita water filters, amongst others.
Responsibilities included the verification of scientific validity of concepts put forward by companies in such varied fields as bioremediation, water filtration and biotechnology.

**1988 to 1990**
**Medical Devices Development** – Mirabel, Quebec, Canada
General Manager
Production of health care and cosmetic products. Work involved establishing protocols relating to the production of pharmaceutical formulations; manage budgets, production line and employees of plant operations (75 employees).

**1985 to 1988**
**Medical Devices Development** – Mirabel, Quebec, Canada
Research Assistant
Oversee the construction of the R&D laboratories and pilot plant facility. Optimization of absorbent material in production by physical-chemical treatment including catalytic high temperature gasification as well as nanoparticle impregnation and activation.

**1985**
**National Medical Care** – Ireland
Project manager
Full-scale production of hemoperfusion devices encompassing biocompatibility process, assembly, quality control and sterilization with a team of 22 employees.

**1982 to 1985**
**Bio-Microencapsulation Technology Inc.** – Montreal, Quebec, Canada
Production Manager
Production of hemoperfusion devices. (17 employees).
Management of production operations for medical devices under GMP and sterile conditions.

**1980 to 1981**
**Computer Dialysis System Inc.** – France
Seminar Coordinator
Technology transfers to hospitals in Paris and Montpellier.

Lab technician

(Homogref, France) Processing of vascular prosthesis under full sterile conditions. Worked under the tutorship of world-renowned Dr. Bonneau in France.

# Schedule B

## Presentations and Research Papers

### Oral Presentations and Conferences

- Development and Applications of Triosyn: A Highly Versatile Iodinated Ion-Exchange Resin
  D. Ohayon, K. Low, P.J. Messier, S. Bourget, J. Tanelli, A.M. Gendron
  **35th Northeast Regional Meeting of the American Chemical Society, Burlington, VT, (2008)**

- The Use of Iodinated Ion-Exchange Resin in the Breakdown of Chemical Surrogate Agents
  D. Ohayon, K. Low, S. Bourget, A.M. Gendron, J. Tanelli, P.J. Messier
  **10th Annual Int'l Chemical Weapons Demilitarization Conference, Brussels, Belgium (2007)**

- A New Level of Respiratory Protection
  P.J. Messier
  **Insitut Pasteur, France (2006)**

- A New Level of Respiratory Protection
  P.J. Messier
  **The White House, Office of the Vice President, (2006)**

- A New Level of Respiratory Protection
  P.J. Messier
  **US Senate Office Building, Office of Senator Frist, (2006)**

- A New Level of Respiratory Protection
  P.J. Messier
  **US Senate Office Building, Office of Senator Leahy, (2006)**

- Antimicrobial Respirator with Enhanced Viral Filtration Efficiency offers Higher Level of Respiratory Protection to Health Care Workers
  Stephane Bourget, J. Tanelli, D. Ohayon, A.M. Gendron, A. Staffa, M.E. Sanscartier, P.J. Messier
  **AMMI Canada – CACMID Annual Conference, Victoria, BC, Canada (2006)**

- The Breakdown of Chemical Agents in Iodinated Ion-Exchange Resin Incorporated onto Glass Fiber Media
  D. Ohayon, K. Low, P.J. Messier
  **2006 Scientific Conference on Chemical & Biological Research (2006)**

- Triosyn Technology for Defense Against Chemical and Biological Warfare Agents
  Stephane Bourget, David Ohayon, J. Tanelli, A.M. Gendron, K. Low, P.J. Messier
  **NBC 2006, Tampere, Finland (2006)**

- Triosyn Technology on the Breakdown of Chemical Warfare Agents and Industrial Chemicals in the Workplace

D. Ohayon, K. Low, S. Bourget, A.M. Gendron, J. Tanelli, P.J. Messier
**Forum on iodine Utilization, Chiba, Japan (2006)**

- Biological Protection: The First Disposable Half-Mask with Active Protection
  S. Allemand, P.J. Messier
  **The 5th CBRN Seminar, Avignon, France (2005)**

- Triosyn Technology for Defense Against Chemical and Biological Warfare Agents
  David Ohayon, K. Low, P.J. Messier
  **230th American Chemical Society Conference, Washington, DC (2005)**

- Innovative Anti-Microbial Technology for Frontline Personnel
  P.J. Messier
  **Levitt-Safety & Triosyn Corp, Vancouver, British Columbia (2005)**

- Microbiocidal Filtering Media for Individual Protection: Facemasks and Canisters
  Stephane Bourget, D. Ohayon, J. Tanelli, A.M. Gendron, P.J. Messier
  **8th International Symposium on Protection against Chemical and Biological Warfare agents, Gothenburg, Sweden (2004)**

- Emergency Air Purification: Analysis of Protection Level of Commercially Available Products
  Stephane Bourget, David Ohayon & P.J. Messier
  **Montreal Advisory Committee on Antiterrorism, Montreal, Canada (2003)**

- Biocidal Collective and Individual Filtration Membrane against Viral Particulates.
  Stephane Bourget, David Ohayon, & P.J. Messier
  **Advanced Air Purification Technologies for CBRN Protection, Panama City, FL (2003)**

- Triosyn T2 Disinfectant Spray
  Stephane Bourget, L Di Ionno & P.J. Messier
  **Joint Service Chemical and Biological Decontamination Conference, San Diego, CA (2002)**

- Test Method to Assess Biocidal Performance of Air Filtering Media Challenged with Biological Agents
  Stephane Bourget & P.J. Messier
  **ASTM Technical Subcommittee F23.40 on Protective Clothing (Biological), Dallas, TX (2002); U.S. EPA Antimicrobials division, Washington, DC (2002)**

- Thermal Fused Iodinated Polymer as a Biocidal Additive to Commercial and Chemical Resistant Coatings
  Stephane Bourget & P.J. Messier
  **ASTM Technical Subcommittee F23.40 on Protective Clothing (Biological), Dallas, TX (2002); U.S. EPA Antimicrobials division, Washington, DC (2002)**

- An Effective CB Material from Combined Components of Triosyn resin and Surface Enhanced Carbon
  Lucy Di Ionno, J.P.St-Louis, S. Bourget & P.J. Messier
  **NDIA's 27th Environmental Symposium and Exhibition, Austin, TX (2001)**

- Biocidal Air Filtration Membrane
  P.J. Messier, J. Tanelli & Stephane Bourget
  **Chem-Bio Defense Sorbents and Filtration Workshop, Nashville, TN (2001)**

- Triosyn technology
  Stephane Bourget, L. Di Ionno, N. Laderoute, J. Moorehead & P.J. Messier
  **USA-UK-Canada Medical Countermeasures Coordinating Team Meeting, Ottawa, Canada (2001)**

- Triosyn Chemical & Molecular Mechanisms Against Microbiological Entities
  P.J. Messier guest lecturer
  **Asian International Biotechnology Conference, Hiroshima, Japan (1998)**

- Triosyn Microbiological Mechanisms in Various Fluids
  P.J. Messier
  **Japanese Defense Ministry, Medical Section, Tokyo, Japan (1998)**

- Triosyn: Novel Microbiocidal Technology
  P.J. Messier
  **U.S Joint Services, Biocide program, Department of Defense, Edgewood, USA (1998)**

- Decontamination by using Triosyn Interactive Polymer
  P.J. Messier
  **U.S Army and Marines, Dugway proving ground, USA (1998)**

- Disease Transmission Pathways & Triosyn Technological Integration
  P.J. Messier
  **Joint Arabic Government, Kuwait (1998)**

- Bio-Terrorism Threat & Solutions
  P.J. Messier
  **Canadian Embassy, department of Defense, Washington, DC, USA (1998)**

- "Red Tide": Microbiocidal Efficacy of Triosyn
  P.J. Messier
  **Hiroshima University, Hiroshima, Japan (1998)**

- Comparative Study of HEPA Filtration and Triosyn Enhanced Filters
  P.J Messier
  **Hygiene Institute of Berlin, Germany (1997)**

- Microbiocidal Efficiency & Toxicity of Metals
  P.J. Messier
  **Scientific and Industrial Symposium, Tokyo, Japan (1997)**

- Triosyn Air Filtration vs. HEPA Viral Deficiency
  P.J. Messier
  **Kitazato Medical Institute Clinical Center, Tokyo, Japan (1996)**

- Biocidal Chemical Structure and Molecular Interaction of Triosyn
  P.J. Messier
  **Kitazato Medical Institute Clinical Center, Tokyo, Japan (1996)**

- Triosyn Biocidal Technology Industrial Product Enhancement
  P.J. Messier
  **Presentation to Japanese Industrial Complex, Canadian Embassy, Tokyo, Japan (1996)**

- Military Industrial Complex Business Profitability
  P.J. Messier
  **Defense Research establishment Suffield, Canada (1995)**

- Air Filtration: Problems & Solutions in submarines
  P.J. Messier
  **Navy Submarine Section, Ottawa, Canada (1995)**

- Air Filtration: Virus Penetration of HEPA filters
  P.J. Messier
  **Military Intelligence & Surgeon General, Ottawa, Canada (1995)**

- Triosyn: Novel Microbiocidal Technology
  P.J. Messier
  **Department of National Defense Ministry, Federal Government of Canada, Ottawa, Canada (1994)**

- Triosyn: An Interactive Broad Spectrum Microbiocidal Dermatological Technology
  P.J. Messier
  **Canadian Surgeon General Office (1994)**

**Poster Presentations**

- A Biocidal Protection for Exposure to Viral Respiratory Hazards
  Stephane Bourget, A. Staffa, M.E. Sanscartier, M. Ferland, P.J. Messier
  **AMMI Canada – CACMID 2007 Annual Conference, Halifax, NS, Canada (2007)**

- Assessment of the Viral Reduction Efficiency of Respiratory Protection Devices
  Stephane Bourget, A. Staffa, M.E. Sanscartier, P.J. Messier
  **ASM 107$^{th}$ Annual General Meeting of the American Society for Microbiology, Toronto, ON, Canada (2007)**

- Polymer Containing Respirator offers Enhanced Protection Against Airborne Viruses
  Stephane Bourget, A. Staffa, M.E. Sanscartier, P.J. Messier
  **European Aerosol Conference (EAC), Salzburg, Austria (2007)**

- Disposable Respirator for Protection Against Airborne Viral Threats
  Stephane Bourget, B. Arash, A. Staffa, M.E. Sanscartier, P.J. Messier

**9th Int'l Symposium on Protection against Chemical & Biological Warfare, Gothenburg, Sweden (2007)**

- Assessing the Efficiency of Respiratory Protection Devices Against Airborne Viruses
  Stephane Bourget, M.E. Sanscartier, M. Ferland, A. Staffa, P.J. Messier
  **CSM 57th Annual Conference of the Canadian Society of Microbiologists, Quebec City, QC, Canada (2007)**

- Improved Respirator for Protection Against Exposure to Airborne Viruses
  Stephane Bourget, G. Schumer, A. Staffa, M.E. Sanscartier, P.J. Messier
  **APIC 34th Annual Educational Conference, San Jose, CA (2007)**

- NBC Non-powered Triosyn Barrier Collective Protection Solution for Military, Medical and Civilian Application
  J. Tanelli, C. Fitzhardy, T. Bourgeois, P.J. Messier
  **NBC Defense Collective protection Conference Colpro, Orlando, FL, (2006)**

- Antimicrobial Respirator with Enhanced Viral Filtration Efficiency offers Higher Level of Respiratory Protection to Health Care Workers
  Stephane Bourget, J. Tanelli, D. Ohayon, A.M. Gendron, A. Staffa, M.E. Sanscartier, P.J. Messier
  **AMMI Canada – CACMID Annual Conference, Victoria, BC, Canada (2006)**

- Superior Respiratory Protection against Viral Threats
  Stephane Bourget, J. Tanelli, D. Ohayon, A.M. Gendron, A. Staffa, M.E. Sanscartier, P.J. Messier
  **ASM Biodefense Research Meeting, Washington, DC (2006)**

- A Higher Level of Respiratory Protection Against Airborne Viruses
  Stephane Bourget, J. Tanelli, D. Ohayon, A.M. Gendron, A. Staffa, M.E. Sanscartier, P.J. Messier
  **9th Annual Force Health Protection Conference, Albuquerque, NM (2006)**

- Disposable Protection for Exposure to Viral Respiratory Hazards
  Stephane Bourget, A. Staffa, M.E. Sanscartier, P.J. Messier
  **Chemical & Biological Defense Research Conference, Hunt Valley, MD (2006)**

- Respiratory Hazards: Enhanced Protection for First Responders against Viral Threats
  Stephane Bourget, A. Staffa, M.E. Sanscartier, P.J. Messier
  **2nd National Conference on Environmental Sampling & Detection of Bio-Threat Agents, New York City, NY (2006)**

- Novel Air Filtration Composite and Its Application to Non-Powered Passive Filtration for Collective Protection
  David Ohayon, J. Tanelli, S. Bourget, A.M. Gendron, J. Stanley, S. Brown, J. Haselberger, P.J. Messier
  **Scientific Conference on Chemical and Biological Defense, Timonium, MD (2005)**

- Advanced Canister with Improved Antiviral Protection
  Stephane Bourget, J. Wander, D. Ohayon, A.M. Gendron, J. Tanelli, P.J. Messier

**2005 Scientific Conference on Chemical and Biological Defense, Timonium, MD (2005)**

- Improved Respiratory Protection: Antimicrobial Respirator for First Responders
  Pierre J Messier, S. Bourget, M.E. Sanscartier, D. Ohayon, J. Tanelli
  **3rd Mediterranean Emergency Medicine Congress, Nice, France (2005)**

- Improved Protection Factor due to a Newly Developed Microbiocidal Air Media for Medical Facemasks
  Stephane Bourget, D. Ohayon, J. Tanelli, A. de Fayard, P.J. Messier
  **ASTM 8th Symposium on Performance of Protective Clothing, Tampa, FL (2004)**

- Efficacy of a Newly Developed Microbiocidal Electrostatic Membrane Against Aerosolized Viral Particles
  David Ohayon, S. Bourget, A. de Fayard, K. Low, S. Bergeron, A.M. Gendron & P.J. Messier
  **AAAR Annual Conference, Anaheim, CA (2003)**

- Newly Developed Biocidal Collective and Individual Filtration Membrane Against Viral Particulates
  Stephane Bourget, A. de Fayard, D. Ohayon, S. Bergeron, J. Tanelli, P.J. Messier
  **Filtech Europa, Dusseldorf, Germany (2003)**

- Effectiveness of Triosyn Filters in Reducing Airborne Microbial Concentrations in an Environmental Chamber
  Stephane Bourget, P. Jacoby-Garrett, N. Burns-Savage, V. Stevens, P.J. Messier & L. Stetzenbach
  **ASM 102nd General Meeting, Salt Lake City, UT (2002)**

- Triosyn T2 Flash-Dry Broad Spectrum Microbial Aerosol
  Lucy Di Ionno, J.P. St Louis, S. Bourget, C. Fitzhardy & P.J. Messier
  **CSPA 2002, Chicago, IL (2002)**

- Effectiveness of a Thermal Fused Broad-Spectrum Interactive Iodinated Polymer for use in Wound Dressings in Preventing Colonization and Infection of Skin and Soft Tissue
  Stephane Bourget, A.M. Gendron, J.P. St Louis, L. Di Ionno, P.J. Messier
  **Conjoint Meeting of CACMID, CHICA & CIDS (2001)**

- Research on a Biocidal Membrane for use in Individual and Collective Air Filtration
  Stephane Bourget, J. Tanelli, A.M. Gendron, L. Di Ionno, P.J. Messier
  **44th Annual Biological Safety Conference, New Orleans, LA (2001)**

- Novel Interactive Biocidal Low Pressure Drop Air Filtration Membrane for Protection Against Biological Weapons and Bioterrorism
  Stephane Bourget, J. Tanelli, A.M. Gendron, L. Di Ionno, P.J. Messier
  **7th CBW Protection Symposium, Stockholm, Sweden (2001)**

- Research on a Biocidal Membrane for use in Individual Air Filtration
  Stephane Bourget, A.M. Gendron, J. Tanelli, P.J. Messier

**ASM 101st General Meeting, Orlando, FL (2001)**

- Chem/Bio Materials for Protection and Decontamination
  Lucy Di Ionno, J.P. St Louis, S. Bourget, P.J. Messier
  **NDIA 27th Environmental Symposium, Austin, TX (2001)**

- An Effective CB Material from Combined Components of Triosyn Resin and Surface Enhanced Carbon
  Lucy Di Ionno, J.P. St Louis, S. Bourget, P.J. Messier
  **2001 Scientific Conference on Chemical & Biological Defense Research, Baltimore, MD (2001)**

- Research on Hemoperfusion Devices Containing a Thermal Fused Broad Spectrum Biocidal Iodinated Interactive Polymer for the Treatment of Biological Contaminants in Body Fluids
  P.J. Messier, J.P. St Louis, S. Bourget
  **NATO 2000 Civil & Military Blood Conference, Washington, DC (2000)**

# Schedule C

## Scientific Achievements - Patents

**USA**

| | |
|---|---|
| Patents issued | 12 |
| Patents pending | 12 |
| Subtotal | **24** |

**International (excluding US)**

| | |
|---|---|
| Patents issued | 63 |
| Patents pending | 25 |
| Subtotal | **88** |

**Total**

| | |
|---|---|
| Patents issued | 75 |
| Patents pending | 37 |
| Total | **112** |

**Patent and Patent Application Titles**

Iodine/resin disinfectant and a procedure for the preparation thereof - basic Case
Method for treating air with an iodinated resin
A combination comprising a demand disinfectant component and a carrier component and dressing
Textile and article of clothing
Iodine/resin disinfectant and a procedure for the preparation thereof - with broader claims

Iodinated resin disinfectant and a procedure for the preparation thereof - with broader claims
Iodinated resin held to a carrier
Disinfection of air using an iodine/resin disinfectant - with broader claims
Use of iodinated resin to disinfect body fluids and liquids containing microorganisms
Sterilization dressing having an iodine/resin disinfectant
Biostatic air filter
Topical antiseptic solution
Antimicrobial flash dry disinfectant aerosol spray
Composition for deactivating chemically and biologically active agents and method of making same
System, method and apparatus for purifying biological fluids such as blood and constituents thereof
Deactivation of Toxic Chemical Agents
Control of Fungal and/or Bacterial Growth in Aqueous Systems
Method and System for Control of Microorganisms in Metalworking Fluid
Electrostatically Charged Filter Media Incorporating an Active Agent (1) facemask filtering closure (2)
Iodinated Anion Exchange resin & process for preparing same
Combination for Sterilization barriers